17CKP4

CATHODE-RAY TUBE

17-INCH RECTANGULAR, GLASS	14-3/4 BY 11-11/16-INCH PICTURE SIZE
FOCUS - ELECTROSTATIC	FACEPLATE - SPHERICAL, GRAY
DEFLECTION - MAGNETIC	EXTERNAL CONDUCTIVE COATING
110-DEGREE DEFLECTION ANGLE	ALUMINIZED SCREEN

DESCRIPTION AND RATING

The 17CKP4 is an electrostatic-focus and magnetic-deflection, direct-view picture tube. Features of this tube include a short over-all length, a small neck diameter, and an aluminized screen to increase light output and reduce undesirable screen charging. An external conductive coating serves as a filter capacitor when grounded.

GENERAL

ELECTRICAL

Heater Voltage	6.3	Volts
Heater Current	0.6 ± 10%	Amperes
Heater Warm-up Time *	11	Seconds
Focusing Method - Electrostatic		
Deflecting Method - Magnetic		
Deflection Angle, approximate		
Diagonal	110	Degrees
Horizontal	105	Degrees
Vertical	87	Degrees
Direct Interelectrode Capacitances, approximate		
Cathode to All Other Electrodes	5	µµf
Grid-No. 1 to All Other Electrodes	6	µµf
External Conductive Coating to Anode		
Maximum	1400	µµf
Minimum	800	µµf

OPTICAL

Phosphor Number - P4, Sulfide
Fluorescent Color - White
Phosphorescent Color - White
Persistence - Short

Faceplate - Gray

Light Transmission at Center, approximate	76	Percent

GENERAL ELECTRIC COMPANY

from JETEC release #1972, July 8, 1957

MECHANICAL

Over-all Length	12 9/16 ± 5/16	Inches
Greatest Bulb Dimensions		
Diagonal	16 9/16 ± .100	Inches
Width	15 5/8 ± .100	Inches
Height	12 3/4 ± .100	Inches
Minimum Useful Screen Dimensions		
Diagonal	15 3/4	Inches
Width	14 3/4	Inches
Height	11 11/16	Inches
Area	155	Square Inches
Neck Length	5 7/16 $^{+3/16}_{-1/8}$	Inches

Bulb Contact - Recessed Small-cavity Cap, JETEC No. J1-21
Base - Small-Button Eightar, 7-Pin, JETEC No. B7-183
Basing Designation - 8HR
Bulb Contact Alignment
Anode Contact Aligns with Pin No. 4 ± 30 Degrees

Mounting Position - Any

Net Weight, approximate	10 1/3	Pounds

MAXIMUM RATINGS

DESIGN-CENTER VALUES †

Anode Voltage ‡	15,000	Max Volts DC
Focusing-Electrode Voltage	-500 to +1000	Max Volts DC
Grid-No. 2 Voltage	500	Max Volts DC
Grid-No. 1 Voltage		
Negative-Bias Value	140	Max Volts DC
Positive-Bias Value	0	Max Volts DC
Positive-Peak Value	2	Max Volts
Negative-Peak Value	200	Max Volts
Peak Heater-Cathode Voltage		
Heater Negative with Respect to Cathode		
During Warm-up Period not to Exceed 15 Seconds	410	Max Volts
After Equipment Warm-up Period	180	Max Volts
Heater Positive with Respect to Cathode	180	Max Volts

TYPICAL OPERATING CONDITIONS

Anode Voltage §	14,000	Volts DC
Focusing-Electrode Voltage for Focus	0 to 500	Volts DC
Focusing-Electrode Current	-15 to +25	Microamperes DC
Grid-No. 2 Voltage	300	Volts DC
Grid-No. 1 Voltage△	-28 to -72	Volts DC

MAXIMUM CIRCUIT VALUES

Grid-No. 1 Circuit Resistance	1.5 Max Megohms
Grid-No. 2 Circuit Resistance	0.1 Min Megohms
Focusing-Electrode Circuit Resistance	0.1 Min Megohms

Protective resistance in the grid-No. 2 and focusing electrode circuits is advisable to prevent damage to the tube. If applicable, one resistor common to both circuits may be used.

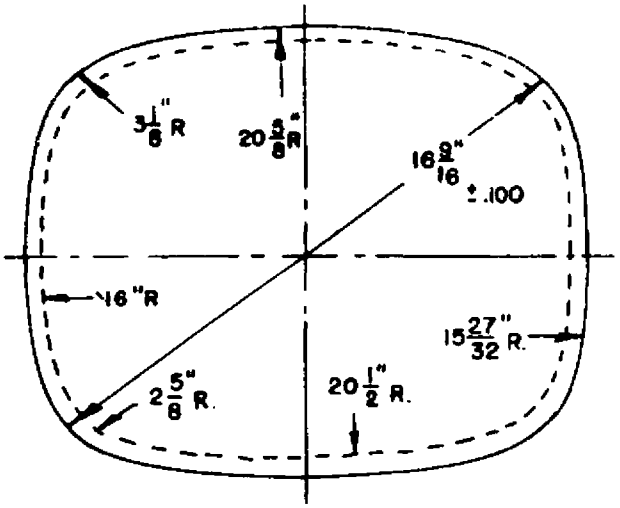
* Heater warm-up time is the time required for the voltage across the heater terminals to increase to 5.0 volts in the JETEC test circuit, with E = 25 volts and series R = 31.5 ohms.

† The maximum ratings provide a ten-percent safety factor in accordance with the standard design-center system of rating cathode-ray tubes. The tube will withstand the combined effects of variations in line voltage and components provided the design-center values are not exceeded by more than ten percent.

‡ Anode, grid-No. 3 and grid-No. 5 which are connected together within the tube are referred to herein as anode.

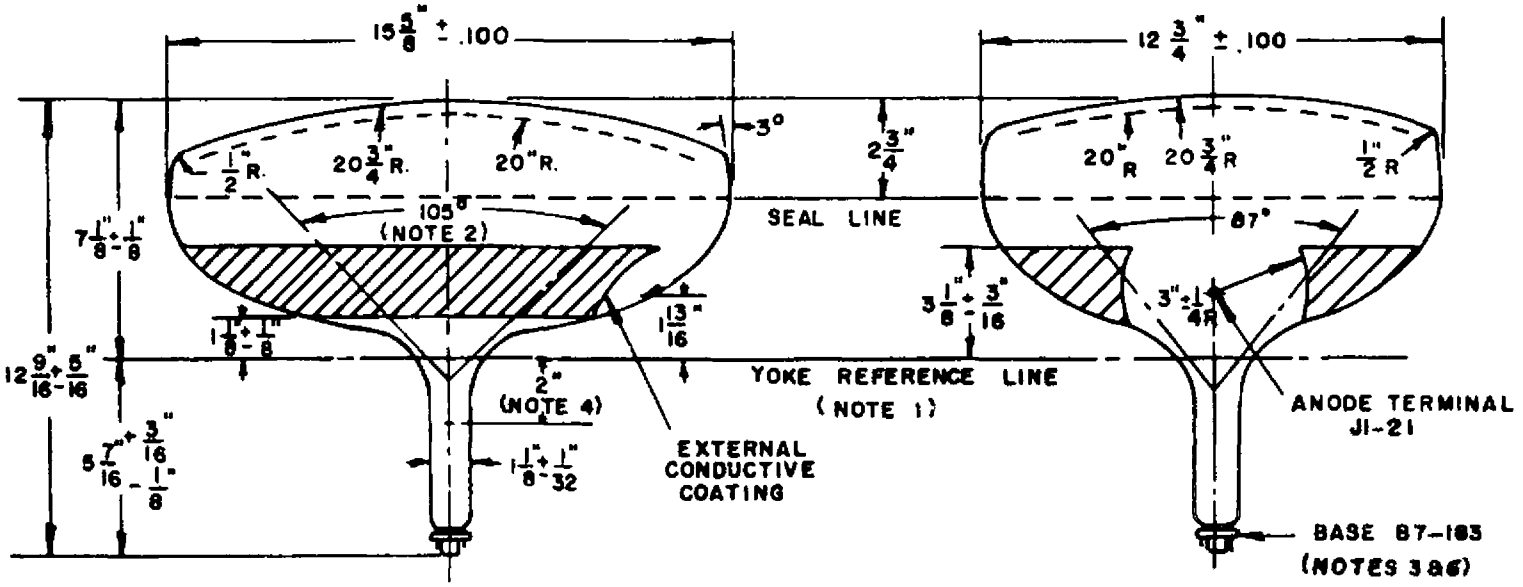
§ Brightness and focus quality decrease with decreasing anode voltage. In general, the anode voltage should not be less than 12,000 volts.

△ For visual extinction of focused raster.



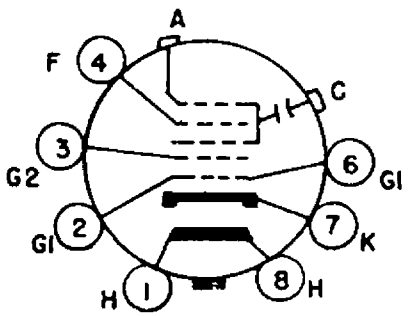
SCREEN DIMENSIONS

DIAGONAL	15-3/4"
WIDTH	14-3/4"
HEIGHT	11-11/16"
AREA	155 SQ. IN.



NOTES:–

1. REFERENCE LINE IS DETERMINED BY THE PLANE OF THE UPPER EDGE OF THE SHOULDER OF THE REFERENCE LINE GAGE (RETMA NO. 126) WHEN THE GAGE IS RESTING ON THE CONE.
2. DEFLECTION ANGLE ON DIAGONAL IS 110°.
3. ANODE TERMINAL ALIGNS WITH PIN NO. 4 ± 30 DEGREES.
4. RECOMMENDED POSITION OF CENTERING MAGNET, IF USED.
5. USE A NON-RIGIDLY MOUNTED SOCKET WITH FLEXIBLE LEADS BOTTOM CIRCUMFERENCE OF BASE SHELL WILL FALL WITHIN 1-3/4 INCHES DIA. CIRCLE CONCENTRIC WITH BULB AXIS.



BASING DIAGRAM

8HR